

REMARKS

Claims 1-29 are pending in this application. By this Amendment, claims 10-13 and 16 are amended and claims 17-29 are added. No new matter has been added.

Claims 10-13 are rejected under 35 U.S.C. §112, second paragraph. The amendments to claims 10-13 overcome the rejection. Specifically, the confusion between the terms "areas" and "lines" has been clarified. Thus, it is respectfully requested that the rejection be withdrawn.

Claims 10, 11, and 16 are rejected under 35 U.S.C. §102(b) over Hara, U.S. Patent No. 5,040,224. The rejection is respectfully traversed.

Hara fails to disclose obtaining a density pattern of an established straight line provided within a fingerprint image, obtaining a density pattern of a comparison straight line provided by shifting the established straight line and in a direction parallel to the established straight line and by predetermined distance, and evaluating the amount of noise contained within the fingerprint image based upon the amount of the similarity calculated in said calculation step, as recited in claim 10 and similarly, as recited in claim 16.

In Hara, the line Adc must cross the line Ad'c' in order to determine a curvature and a direction of the fingerprint ridge line (Fig. 7). As Hara describes, the stratiform ridges 35 have a curvature represented by c and a ridged direction which is specified by a tangential line of the selected stratiform ridge 35 and which is represented by d (col. 5, lines 20-23). The arcuate lines represented by Adc and Ad'c' are extended from a center picture element Vm through first through n-th picture elements distant from the center picture element Vm by quantization distances r_l and r_n , respectively (col. 5, lines 26-30). Hara calculates the integral value $(G)r$ as a function of the distance r from the center picture element Vm by integrating variations between the density levels of adjacent picture elements arranged along the first and the second curves Adc and Ad'c' (Fig. 7; col. 5, line 64-col. 6, line 6). As clearly shown in Fig. 7, the arcuate lines represented by Adc and Ad'c' cross each other at the center picture

element Vm. Thus, Hara determines the curvature and the direction of the fingerprint ridge line from the center picture element Vm, which is where arcuate lines Adc and Ad'c' cross each other.

Accordingly, Hara does not disclose or suggest that the comparison straight line is provided by shifting the established straight line in a direction parallel to the established straight line and by predetermined distance, and that the amount of noise is evaluated based upon the similarity between the density pattern of the established straight line and the density pattern of the comparison straight line, as outlined in claims 10 and 16.

Thus, Hara does not disclose or suggest each and every feature of Applicants' claimed invention as recited in claims 10 and 16 and the rejection under 35 U.S.C. §102 is inappropriate.

Because Hara does not disclose or suggest the recited features of claim 10, Hara cannot possibly disclose or suggest the subject matter of claim 11, which depends from claim 10, for the reasons discussed with respect to claim 10 and for the additional features recited therein. Likewise Hara does not anticipate or suggest the subject matter of new claims 17-21, depending from claim 10 or claims 22-29 depending from claim 16 for the reasons discussed with respect to claims 10 and 16 and for the additional features recited therein. It is respectfully requested that the rejection be withdrawn.

Claim 12 is rejected under 35 U.S.C. §103(a) over Hara and Hamada et al. (Hamada), U.S. Patent No. 5,426,708. Regarding claim 13, the Examiner took official notice and asserted that comparing pitches of waveforms is well known in image processing. The rejection is respectfully traversed.

Hamada fails to overcome deficiencies of Hara as applied to claim 10.

Because the alleged combination of Hara and Hamada does not disclose or suggest all of the features recited in claim 10, the alleged combination cannot possibly render obvious

the subject matter of claim 10. Further, at least for the reasons discussed with respect to claim 10 as well as for the additional features recited, claims 12 and 13, which depend from claim 10, are also not rendered obvious by the alleged combination of Hara and Hamada. Thus, withdrawal of the rejection is respectfully requested.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-29 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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Attachments:

Amendment Transmittal
Petition for Extension of Time

Date: February 6, 2006

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